

### **REMARKS**

Claims 1-10 and 16-24 are presented for examination.

By this amendment, claims 16-24 have been added.

It is respectfully requested, in accordance with the provisions of 37 CFR 1.56, 1.97 and 1.98, that a citation and examination of the references listed on the attached Form PTO-1449 be made.

Attached herewith is a copy of an International Search Report dated January 13, 2003 for a corresponding PCT Application. In this Search Report, British 2 349 014 was cited in Category X with regard to certain claims of the PCT Application and in Category Y with regard to some other claims. In addition, both Japanese 2000-58594A and its corresponding U.S. Patent No. 6,288,445 were cited in Category X with regard to certain claims of the PCT Application and in Category Y with regard to other claims. In addition to those three references, U.S. Patent Nos. 4,682,270 and 5,760,469 along with WO 99/39021 A were cited in Category Y with regard to at least one of the claims of the PCT Application. Copies of these six references are attached herewith.

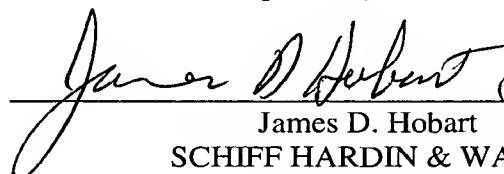
It is respectfully submitted that while the British Reference may show an annular groove, such as 43 and 56, around a BGA pad 44 and a circuit card pad 54, it does not teach or suggest through-holes between the upper face and the lower face, with the through-holes having walls which are at least partially metallized to make a conductive connection between an internal connection on the upper face and a corresponding external connection on the lower face. It is noted that in Fig. 10 of the British Reference, a via 220 is illustrated with electrical connections, such as 222. However, there is no suggestion of this connection being formed by at least a partial metallization, as recited in allowed independent claims 1 and 10. Thus, it is submitted that the British Reference does not change the allowability of these claims. In a similar manner, it is submitted that newly-submitted claims 16-24 recite structure which is not taught or suggested by this British Reference.

It is also submitted that the other five references cited in the Search Report do not teach or suggest the invention claimed in allowed claims 1-10 or the invention recited in newly-presented claims 16-24.

It is also submitted that there is no teaching or suggestion of combining the bits and pieces of the various references with references already of record to render applicant's claimed invention obvious. For these reasons, it is respectfully submitted that claims 1-10 are still allowable over the newly-presented prior art and that newly-presented claims 16-24 are allowable over the newly-presented prior art and the art of record.

It is respectfully submitted that this application is now in condition for immediate formal allowance and further reconsideration to that end is earnestly solicited.

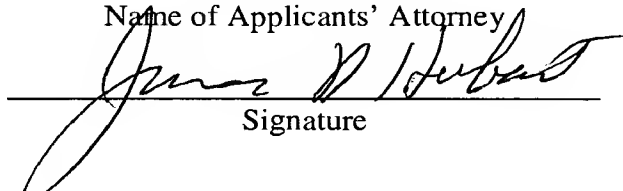
Respectfully submitted,

  
(Reg. No. 24,149)  
James D. Hobart  
SCHIFF HARDIN & WAITE  
Patent Department  
6600 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606  
(312) 258-5781  
**Customer Number: 26574**

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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450 on June 12, 2003.

James D. Hobart  
Name of Applicants' Attorney  
  
Signature  
June 12, 2003  
Date